CLAIMS

1. Deep-rolling device of a deep-rolling machine for
    crankshafts designed in scissor construction with two
    swivellable scissor arms lying opposite each other,
    each carrying a deep-rolling roller head or a backing
    roller head respectively, where the backing roller
    head is fitted with two parallel-axisly arranged
    backing rollers of which the rotational axes lie in a
    common plane, with a drive device which generates the
    closing and opening movement of the deep-rolling
    machine and the deep-rolling force, characterised in
    that the backing roller head (14) has at least one
    axial guide (27)
    - which in swivel direction (35) is arranged in front
    of the backing rollers (21, 22) to close the scissor
    arm (10) carrying the backing rollers (21, 22),
    - the longitudinal axis (41) of which is perpendicular
    to the rotational axis (4) of the crankshaft (3) and
    lies in a direction which encloses an acute angle (37)
    with the plane (34) of the rotational axes (32, 33) of
    the backing rollers (21, 22), and
    - the axial width (28) of which is greater than the
    width (29) of the backing roller head (14) and
    slightly less than the distance (29a) of the oil
    collars (25, 26) of a main bearing journal (5) or big
    end bearing journal (6).

2. Deep-rolling device according to Claim 1,
    characterised in that the acute angle (37) is 0° and
    the longitudinal axis (41) of the axial guide (27) has
    a distance (s) from the plane (34).

3. Deep-rolling device according to Claim 1, characterised in that the axial guide (27) has a contour which is prismatic, cylindrical, crowned or composed of different geometric sections (39, 40).

4. Deep-rolling device according to any of Claims 1 to 3, characterised in that several axial guides (27) are allocated to each of two backing rollers (21, 22), the axial width (28) of which guides is less than the width (29) of the backing roller head (14) and the outer width of which is slightly less than the distance (29a) of the oil collars (25, 26) of a main bearing journal (5) or big end bearing journal (6).